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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/834,848	04/13/2001	Gareth Geoffrey Hougham	YOR920000548US1	8391
7590 12/02/2003			EXAMINER	
Alvin J. Riddles Box 34, Candlewood Isle New Fairfield, CT 06812			ZIMMERMAN, JOHN J	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 12/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/834,848

Applicant(s)

HOUGHAM ET AL.

Examiner

John J. Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6,9-11,16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6,9-11,16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

THIRD OFFICE ACTION

Response

1. This Office Action is in response to the correspondence received from applicants on October 8, 2003. Claims 6, 9-11 and 16 are pending in this application.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on October 8, 2003 has been entered.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 6 and 9-11 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a

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process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966). Independent claim 6 begins with the phrase "In the handling of spilled mercury through the use of an intermediate absorber member for the spilled mercury" and independent claim 11 begins with the phrase "In the handling of spilled mercury through transfer from the spillage location". The "use" language of the phrases in the preamble suggests that the claims are drawn to a process of handling spilled mercury through transfer from the spillage location. These claims are rejected because process claims (i.e. "process of using" claims) must have actual active process steps set forth in the claims (e.g. see the active process language of handling spilled mercury in new claim 17).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 6, 9-11 and 16-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. As noted above, claims 6 and 9-11 provide for "the use" of an absorber member, but, since the claims do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely

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recites a use without any active, positive steps delimiting how this use is actually practiced.

Applicant must construct the claims to clarify whether a "use" claim (having proper active method steps) is intended.

8. It is not clear if the phrase "said member being of a material including particles, woven and filaments, metal powders and particle sponges" (e.g. see claims 16 and 17) means that the member must include all of the types of materials or only at least one of the materials. Applicant should revise the language of the phrase to clarify the limitation. In addition, proper Markush language is "from the group consisting of" instead of "from the group of" (e.g. see claim 9, line 2).

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 6, 11 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Yan (U.S. Patent 5,322,628).

11. Yan discloses removing mercury from liquid using capillary tubes packed with gold coated zeolite particles (e.g. see Example 2; column 8, lines 45-66).

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12. Claims 6, 11 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Williston (U.S. Patent 3,232,033).

13. Williston discloses that spilled mercury becomes a hazard (e.g. column 1, lines 25-29) and uses a porous wool coated with gold to remove mercury from the environment (e.g. see column 2, lines 4-31).

14. Claims 6, 9, 11 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hasenpusch (German Offenlegungsschrift 3729030 A1).

15. Hasenpusch discloses removing spilled mercury using mercury absorbent gold coated metal particles (e.g. see abstract and entire document for various materials).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 6, 9-11 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seidenberger (U.S. Patent 4,076,553) in view of Hasenpusch (German Offenlegungsschrift

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3729030 A1), and further in view of Jackson (U.S. Patent 3,715,797) or Spirig (U.S. Patent 4,416,408), and further in view of Gunter (U.S. Patent 4,125,387).

18. Seidenberger discloses contacting spilled mercury with a wicking transfer tool comprising porous wool coated with zinc to remove mercury from the environment (e.g. see column 2, lines 4-14). Seidenberger differs from some claims in that Seidenberger uses cheaper zinc to coat his wick instead of gold. Hasenpusch, however, clearly discloses that it is well understood in the prior art that absorbers of spilled mercury can also be plated with gold in order to quickly form an amalgam with the mercury for good clean up (e.g. see abstract and entire article). In view of Hasenpusch, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use gold to coat the wicking transfer tool of Seidenberger because Hasenpusch clearly discloses that gold is also understood in the art to be a particularly good coating material for mercury spill clean up. Seidenberger may also differ from the claims in that Seidenberger's wicking transfer tool is a wool instead of a braid. Jackson (e.g. see Figure 2) and Spirig (e.g. see Figures 1-2), however, clearly show that one of ordinary skill in the art clearly understands that liquid metal can also be absorbed by wicking tools in the braided form. This is a fairly disclosed concept that anyone in the liquid metal absorbing art would be aware of and understand. In view of Jackson and Spirig, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a braided form for the wicking tool of Seidenberger because Jackson and Spirig clearly show that braided wicking tools are understood in the art to be particularly effective at absorbing liquid metal. As further evidence that one of ordinary skill in the art understands that the use of cloths and screens to wick is conventional,

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Gunter clearly shows this concept specifically applied to the wicking of mercury is understood (e.g. column 5, lines 24-31).

Response to Arguments

19. The following paragraphs are in response to the arguments received from applicants on October 8, 2003.

20. It is not clear how the applicant's response has addressed the rejection of the claims under 35 U.S.C. 101. No specific discussion of this rejection was found in the response. Regarding the rejection of the claims under 35 USC 112, second paragraph, the First Office Action stated that proper Markush language was needed in claim 9. Applicant did not address this rejection by either amendments to the claim or through arguments. In addition, applicant did not specifically clarify how the claim construction of claims 6-11 were definite.

21. Regarding the prior rejections of claim 6 under 35 U.S.C. 102(b) as being anticipated by Jackson (U.S. Patent 3,715,797), Spirig (U.S. Patent 4,164,606), Spirig (U.S. Patent 4,416,408) or Kent (U.S. Patent 5,305,941), applicant's amendments to the claim has overcome these rejections.

22. Regarding the rejections under 35 U.S.C. 102(b) as being anticipated by Yan (U.S. Patent 5,322,628), Williston (U.S. Patent 3,232,033) and Hasenpusch (German Offenlegungsschrift 3729030 A1), all the applied references have the same structure as that required by the rejected

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claims (e.g. powder, wool, etc. . .) and therefore the structures of the applied art are inherently capable of fulfilling the claimed intended use even if that is not the intent of the prior art. In any event, the references do disclose cleaning mercury (particularly note Hasenpusch) and what distinguishes "spilled mercury" verses the disclosed contaminant mercury vapor of the Yan and Williston references is not clear.

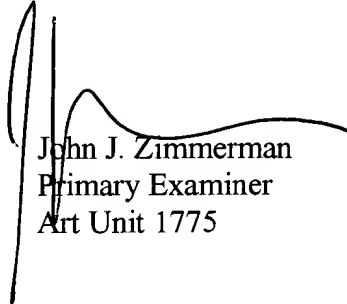
23. Regarding the rejection of the claim under 35 U.S.C. 103(a) as being unpatentable over Seidenberger (U.S. Patent 4,076,553) in view of Hasenpusch (German Offenlegungsschrift 3729030 A1), and further in view of Jackson (U.S. Patent 3,715,797) or Spirig (U.S. Patent 4,416,408), and further in view of Gunter (U.S. Patent 4,125,387), applicant has not presented any rationale as to why this rejection is not proper. From the First Office Action, the examiner carefully discussed the motivation for combination of each of these references in the rejection and also showed the level of ordinary skill in the art as it was understood at the time the invention was made. No argument from applicant has been presented which specifically addresses the merits of the references as they are combined in this rejection or any specific error in the examiner's rationale for combination.

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (703) 308-2512. The examiner can normally be reached on 8:30am-5:00pm, M-F. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310. Any inquiry of

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a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
November 25, 2003